FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT FOR THE IMPLEMENTATION OF WYOMING GAME AND FISH DEPARTMENT'S PROPOSED INTERIM BRUCELLOSIS VACCINATION PROGRAM FOR ELK ON THE NATIONAL ELK REFUGE, TETON COUNTY, WYOMING

In accordance with the provisions of the National Environmental Policy Act of 1969 and the regulations of the Council on Environmental Quality (40 CFR 1500-1508), the U.S. Fish and Wildlife Service (USFWS) prepared an environmental assessment (EA) for a proposal submitted by the Wyoming Game and Fish Department (WGFD) pursuant to a legal settlement agreement between the United States and the State of Wyoming. The WGFD proposes to vaccinate calf and cow elk on the National Elk Refuge (NER) using Strain 19 beginning in early 2003. The EA and draft compatibility determination were distributed for public review on December 9, 2002. The public comment period closed on January 15, 2003.

PURPOSE AND NEED FOR ACTION

The EA was prepared pursuant to the settlement agreement entered into between the USFWS and the State of Wyoming in the case entitled *Wyoming v. United States et al.,* Docket No. 98-CV-037B, in which the USFWS agreed to prepare a compatibility determination and complete an EA concerning Wyoming's proposed elk vaccination program for the NER. Although a more complete explanation of the purpose and need for action is provided in the EA , the essence of purpose and need is captured in the following two paragraphs.

The WGFD's purpose in proposing the brucellosis vaccination program is to increase coverage and protection of feedground elk in northwestern Wyoming. The WGFD vaccination program currently is carried out annually on 21 WGFD feedgrounds in northwestern Wyoming. Since 1985, approximately 53,000 doses of Strain 19 Brucella vaccine have been ballistically delivered to feedground elk. The NER is only one of two winter feedgrounds in Wyoming where elk are not vaccinated. The WGFD believes that vaccinating elk on the NER will enhance immunity and reduce the risk of transmission of brucellosis by reducing abortions caused by brucellosis.

The need for action is that the elk overwintering on the NER maintain a relatively high prevalence of brucellosis, and this poses a risk to Wyoming's livestock industry and its brucellosis Class-Free status and, from WGFD's perspective, it also poses a risk to the conservation of elk in Jackson Hole. As members of the Greater Yellowstone Interagency Brucellosis Committee, the USFWS and WGFD have committed to address this issue and work toward achieving the committee's goals of protecting and sustaining the existing free-ranging elk and bison populations in the Greater Yellowstone Area and protect the public interests and economic viability of the livestock industry in the States of Idaho, Wyoming, and Montana. The USFWS has adjusted management programs on the NER over time to contribute to the goal, and the WGFD proposal has been designed to further contribute to meeting the goal on the NER.

PROPOSED ACTION

The WGFD's interim vaccination program would be carried out as described in the EA, except that it can only be carried out during the winters 2002-2003, 2003-2004, and possibly 2004-2005. Additionally, several actions are listed (at the end of this section, below) that could be taken if elk or bison react strongly to acclimation or vaccination procedures. The following description is a summary of what is described in the EA.

The WGFD has proposed to conduct a brucellosis vaccination program for elk on the NER throughout the feeding season. The vaccination program would be conducted in two phases: acclimation and vaccination. If approved, implementation of the Proposed Action would begin soon after winter feeding is initiated in the winter of 2002-2003. The interim vaccination program would continue until the Record of Decision (ROD) for the Bison and Elk Management Plan (BEMP) Environmental Impact Statement (EIS), for the NER and Grand Teton National Park (GTNP), is signed but would not proceed beyond the winter of 2004-2005. After the ROD is signed, the BEMP would guide brucellosis management on the NER. Vaccination procedures during the interim period would be carried out as described below.

Feeding Operations. Although feeding operations on the NER would not be changed appreciably, feedlines would be spaced somewhat further apart than currently practiced to facilitate vaccination operations. Feedlines would be spaced up to 50 yards apart to provide a maximum shooting range of 25-30 yards when the vaccination team drives the over-the-snow vehicle between feedlines. No significant changes to feeding operations would be undertaken. The approval of the WGFD's proposal to vaccinate on the NER would not affect the USFWS's decisions, in cooperation with the WGFD, in a given winter related to (1) when to begin winter feeding, (2) how long feeding is conducted (number of days in a given winter), or (3) whether feeding is carried out or not carried out in a given winter.

Vehicles. The WGFD would use a tracked over-the-snow vehicle (LMC 1500 Beartrac or equivalent) to follow feed trucks during feeding operations to acclimate elk and to provide a vehicle from which to administer the vaccine. The WGFD owns one Beartrac vehicle. If WGFD rents a second oversnow vehicle or secures access to another oversnow vehicle, then two teams would vaccinate elk. The WGFD and USFWS would work together in determining the best vehicle to use. The vehicle combination that disrupts feeding operations the least, disturbs elk the least, and provides the most effective platform to shoot from would be used.

Acclimation. Beginning soon after the onset of supplemental feeding, WGFD technicians would begin to acclimate elk to the presence of the Beartrac vehicle, the two-person team (one to drive the vehicle and one to vaccinate), the report of an air-gun, and other sounds and actions associated with vaccination. Guns (vaccine and paintball) would be dry-fired at varying velocities to acclimate elk to the report of the gun as the support vehicle passes along the feedlines.

At the beginning of the acclimation period, acclimation activities would be carried out while feed trucks are dispensing pellets. As the animals become accustomed to the presence of the support vehicle, two-person team, and the vaccination guns, the vehicles would spend

progressively longer amounts of time in the vicinity of the feedlines and closer to the elk. The acclimation period could require from several hours up to several weeks. Due to the unknown response of elk, the duration of the acclimation period cannot be predicted at this time. The determination of when to cease the acclimation period and begin vaccinating would be somewhat subjective, but would require elk to remain within 50-75 feet of the support vehicle as it passes along a feedline and occasionally comes to a stop.

Vaccination of Elk. Vaccination would begin when the WGFD determines that elk are sufficiently acclimated to the two-person team, additional vehicle, and discharge of firearms and that elk would remain within 50-75 feet of vehicle holding the two-person team. The protocol for vaccination would mimic that for acclimation of elk except that (1) an air-powered biobullet gun would be used to ballistically inject biobullet containing approximately 5.3×10^9 colony-forming units of freeze-dried Strain 19 vaccine, and (2) an air-powered paintball gun would be used to mark each vaccinated animal with an oil-based paint to ensure that it is not vaccinated more than once.

The support vehicle would continue to be operated the same way it was operated during the acclimation period, which includes occasional stops. Ideally, two vaccination teams would be used so that vaccination could be carried out at two or more feeding sites each day. Vaccination would target juvenile elk at each of the four feeding sites, but would also include adult female elk. Adult cow elk would also be vaccinated to more quickly increase the number of animals in the population that are vaccinated with Strain 19.

During the first few winters of the program, an attempt would be made to vaccinate at least 80% of elk calves, and possibly as many as 50% or more of the adult female elk. This means that approximately 1,200 calves and 2,000 cows (or, a total of about 3,200 elk) would have to be vaccinated each year. The time required to complete vaccination in a given winter cannot be predicted due to the unknown response of elk on the NER. In 2002, the average vaccination time on state feedgrounds was 20 calves per hour (range: 7-57).

Monitoring. Monitoring would continue to be conducted as it has in the past (No Action Alternative). The WGFD and USFWS would determine a statistically viable sample size and this number of elk would be tested during sample years.

Actions that could be Taken to Avoid Adverse Impacts

Chapter 4 of the EA noted several times that if major adverse effects reoccur, corrective actions would be taken to ensure that they do not recur. Stipulations to maintain compatibility, listed in the compatibility determination, specify that if certain effects (identified in the compatibility determination) result from acclimation or vaccination procedures, changes to acclimation and/or vaccination procedures would be required to remedy the problem. These stipulations are an integral part of the proposed action. As noted in the EA, major adverse effects are not anticipated, but the following corrective actions would be considered for implementation in the event that any such problems arise. The USFWS and WGFD would work together to identify and implement workable solutions (this is a nonexclusive list).

1. Reduce the amount of time that the WGFD vaccination team is on a particular feed site.

2. More closely observing animal behavior and either halting acclimation/vaccination temporarily until any escalating response subsides or terminating activities before behavioral responses escalates.

3. Reinitiate acclimation procedures for a period of time.

4. Temporary cessation of acclimation or vaccination activities on one or more feeding sites for one or more days to allow the USFWS to redistribute elk in order to attain desired (e.g., pre-disturbance) numbers of elk at each feeding site.

If attempts to correct the problem do not prevent major adverse impacts, as described in the EA, the interim vaccination program would be discontinued at the feeding sites where this is occurring.

ALTERNATIVES CONSIDERED

One alternative to the Proposed Action was evaluated in the EA (the No Action Alternative). The USFWS, in consultation with WGFD, believes the consideration of two alternatives is an appropriate range of alternatives given the short-term nature of an interim vaccination program. Additionally, analysis in Chapter 4 of the EA allows the decision maker to select either the No Action Alternative, the Proposed Action, or some action within the range of those two alternatives. Finally, the Proposed Action is in the nature of the request for a determination of whether an action is compatible with refuge purposes, rather than a proposal by the USFWS to address a refuge management problem. In such circumstances, the issue is whether to allow the requested activity, not to create an array of options to meet an identified refuge management need. The No Action Alternative is described in the EA.

RATIONALE

The following describes why the Proposed Action will not have significant impacts on the human environment:

1. The Proposed Action would not significantly affect elk and bison foraging habitat, deciduous woody vegetation, and other habitats on the NER.

2. The Proposed Action would not significantly affect behavior, social interactions, annual production, mortality rates, genetics, or population levels of the elk inhabiting the NER and the Jackson elk herd unit. In the event that major impacts began to occur, the vaccination program would be modified or halted.

3. Because the Proposed Action would be modified or halted if such effects were to occur, the interim vaccination program would not significantly affect bison behavior (e.g., through disturbance) or safety, nor would it significantly affect other native wildlife through changes in habitat, changes in numbers and distribution of elk and bison, and biosafety.

4. The Proposed Action would not significantly affect threatened, endangered, and sensitive species.

5. The Proposed Action would not significantly affect recreational opportunities associated with elk or bison.

6. The Proposed Action would not significantly affect the livestock sector and the protection of Wyoming's Class-Free status.

7. The Proposed Action would not significantly affect human health, cultural and historic resources, social values, or the local economy.

8. The Proposed Action would not unduly discriminate against any particular minority group.

9. The Proposed Action would not have any significant cumulative effects on resources or opportunities.

10. Given the stipulations identified in the Finding section of this FONSI, the Proposed Action would not prejudice the outcome of the BEMP EIS.

PUBLIC INVOLVEMENT

The EA and a draft compatibility determination were distributed for a 30-day public review on December 9, 2002, as required in the settlement agreement, as modified by agreement of the parties. The documents were sent to more than 800 people, organizations, governing bodies, and agencies, including those on the mailing list for the NER and GTNP bison and elk management plan EIS project. A news release announcing the availability of the EA and draft compatibility determination was faxed to the media throughout Wyoming and articles announcing their availability were published in several newspapers. Public comments were accepted during a 30-day comment period which ended on January 15, 2003.

Comment letters were received from 305 people (individuals) and 13 non-governmental organizations. Of the 305 individuals, 303 opposed the Proposed Action and the opinions of two individuals could not be accurately ascertained. Of the 12 non-governmental organizations, two supported the Proposed Action and 10 opposed it (one of the non-governmental organizations supporting the Proposed Action did so with strong reservations). Comment letters received from the WGFD and Wyoming Livestock Board noted their support for the Proposed Action and identified concerns about the EA and draft compatibility determination.

A copy of the public comment analysis can be obtained by calling the National Elk Refuge at (307) 733-9212, or writing the National Elk Refuge at P.O. Box 510, Jackson, Wyoming 83001 or bison/elk_planning@fws.gov. Copies can also be obtained from the following website: http://mountain-prairie.fws.gov/ea/infopackets/nationalelk.

ADDITIONAL INFORMATION BASED ON PUBLIC COMMENTS

Several issues identified in public comments are addressed below, in addition to the adjustments made to the Proposed Action based on public comments. The information below amends the EA.

Segmentation of Federal Actions

Several letters from organizations and individuals expressed concern that the consideration of WGFD's interim vaccination program improperly segments actions that are being evaluated in the BEMP EIS that is currently being prepared by the USFWS and the National Park Service (NPS).

The legal settlement agreement between the State of Wyoming and the USFWS requires that the USFWS prepare an EA, compatibility determination, and biological assessment for the WGFD's proposed interim vaccination program. The agreement specifically recognized that the USFWS and the NPS are in the process of preparing an EIS that evaluates the use of vaccination as a tool for the long-term management of brucellosis, and the U.S. District Court for the District of Wyoming directed the USFWS and State of Wyoming to comply with the terms of the settlement agreement. The settlement agreement requires that the USFWS make a decision based on the results of the EA, compatibility determination, and biological assessment (independent of the decision to be made in the BEMP EIS), and that the decision will "...either be a Finding of No Significant Impact or that the impacts of the [WGFD's] proposed program are significant and require an Environmental Impact Statement."

As noted in Chapter 2 of the EA, the decision was not to be based on whether the interim vaccination program would contribute to any elk management goals or objectives of the NER because the interim, 3-year program was not designed or intended for this purpose. The proposed action is a limited action that is independent of any federal program or plan. The USFWS is responding to an outside request to conduct an activity on the NER, and the USFWS has evaluated the proposal in this context. Given the assurances made in the FONSI (see Finding section), implementation of the interim vaccination program will not prejudice the decision to be made in the BEMP EIS or impact long-term management of the NER, nor will it impact the winter feeding program that is subject to the ongoing BEMP EIS process. The WGFD understands that implementation of the interim vaccination program for up to 3 years will not influence the USFWS's decision in the BEMP EIS process, aside from additional data provided through monitoring. The WGFD is aware that the interim program can only last as long as 3 years and that the selected alternative in the BEMP EIS process may or may not include vaccination of elk with Strain 19.

In addition, as shown by the analysis in the EA, the environmental consequences of the action are minimal. Thus, not only will this decision not affect the decision on the BEMP EIS, it has very small consequences on the ongoing management of elk.

See also the discussion pertaining to precedence, below.

Absence of any Assessment of the Potential for Setting a Precedence

Several letters from organizations and individuals expressed concern that allowing WGFD to implement their interim vaccination program on the NER would set a precedence for future management or would prejudice the outcome of the BEMP EIS.

The potential for the implementation of WGFD's interim vaccination program to set a precedence or otherwise influence the outcome of the BEMP EIS process was identified as an issue in the EA (page 7), but it was not analyzed in the EA. The USFWS recognizes that, once a non-USFWS program is implemented on a national wildlife refuge, it is sometimes difficult to modify or eliminate it in the future, and in this case, that it also has the potential to make it more difficult to make changes to other related programs (e.g., winter feeding). In this respect, the implementation of the interim vaccination program has the potential, if unchecked, to influence the outcome of the BEMP EIS. However, there are several reasons why the implementation of WGFD's interim program would not ultimately have a bearing on the outcome of the BEMP EIS.

WGFD's proposal was not designed or intended to contribute to NER elk management goals or objectives. It is not part of a federal program. This contrasts with the role that Strain 19 vaccination would play, if it were included in the BEMP, upon the signing of the ROD for the BEMP EIS. Disease management strategies in the forthcoming bison and elk management plan for the NER and GTNP, of which Strain 19 vaccination may or may not be a part, will be aimed specifically at meeting goals of the NER and GTNP. The decision of whether to include Strain 19 vaccination (or other vaccine) in an integrated and comprehensive disease management strategy for the NER (in the BEMP EIS) will be based on decision criteria not considered in the decision identified in this FONSI. To ensure that the decision in the BEMP EIS is not prejudiced by the implementation of the WGFD's interim vaccination program, several stipulations are listed in the Finding section of this FONSI. WGFD expenditures spent during the interim program will not be a consideration as to whether Strain 19 vaccination of elk on the NER will continue as a result of the BEMP EIS process. Additional information collected through monitoring during the interim period would be considered in preparation of the BEMP EIS.

Inadequacy of Cumulative Effects Analysis

Concern was raised that the EA did not include an analysis of cumulative impacts. The following paragraph addresses this concern.

The impact analysis in the EA was based on the available information. Cumulative impacts of a long-term vaccination program will be addressed in the BEMP EIS. Because of the interim nature of the proposal and because the negligible impacts of the proposal would not contribute or add measurably to the degradation of habitat, disease risks, and other impacts caused by related programs on the NER (e.g., winter feeding), the impacts of these other programs were not detailed in the EA. The winter feeding program on the NER will continue at least until the ROD for the BEMP EIS is signed, regardless of whether the interim vaccination program is implemented. This means that any adverse impacts of the winter feeding program will continue through the duration of the interim vaccination program, independent of the decision to allow

WGFD to implement the interim program. If the negligible impacts of the interim program are combined with the impacts of related ongoing programs, its implementation would not change the level of significance of the combined effects of related programs.

Other Addendums to the Environmental Assessment

Other specific modifications to the EA are listed in an errata sheet (Attachment B).

ENDANGERED SPECIES ACT COMPLIANCE

The Wyoming Field office of Ecological Services, USFWS, concurred with the "determination that the project is not likely to adversely affect, but will beneficially affect the grizzly bear, gray wolf, and bald eagle and will have no effect on the Canada lynx." (see letter, Appendix B).

FINDING

I have determined that the WGFD's proposed interim brucellosis vaccination program for elk on the NER does not constitute a major federal action significantly affecting the quality of the human environment. Negative environmental impacts that could occur would be negligible or minor and temporary in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, or other unique characteristics of the region. No highly uncertain, unique or unknown risks, cumulative effects, or controversy associated with scientific information used in evaluating environmental effects were identified. Implementation of the action will not violate any federal, state, or local law. Therefore, in accordance with the National Environmental Policy Act of 1969 and the regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement is not required for this project and will not be prepared.

In response to public concerns about the potential for precedence, segmentation, and cumulative effects (see the "Additional Information Based on Public Comments" section) and to demonstrate the USFWS's commitment to consider the use of Strain 19 in the BEMP EIS process independent of the present decision, the USFWS commits to evaluating Strain 19 vaccination (and other vaccines) in the context of a comprehensive and integrated disease management program that will include (1) an assessment of Strain 19's efficacy in elk; (2) an assessment of the extent to which reinfection by bison could offset gains made by vaccinating elk in the short and long terms; (3) distinction between risks of brucellosis to elk/bison and livestock, and the consideration of strategies to address each; (4) consideration of all existing disease risks and potential future disease risks of elk inhabiting the NER and potential strategies that could comprehensively address them (including habitat-based approaches); (5) evaluation of disease management strategies in the context of addressing the underlying factors that sustain elevated transmission rates and prevalence of diseases in NER elk and bison, and in the context of legal directives and policies governing the management of the NER and wildlife management principles; (6) consideration of Greater Yellowstone Interagency Brucellosis Committee goals and objective, and WGFD objectives; and (7) an analysis of the effects of Strain 19 cumulative with the effects of related programs. Furthermore, the No Action Alternative of the BEMP EIS will not include the use of Strain 19 vaccination, as the WGFD's interim vaccination program

will cease with the signing of the ROD for the BEMP EIS. Except for a broad analysis of cumulative impacts, given the parameters set in place by this decision, the USFWS did not need to analyze these factors in order allow WGFD to implement their interim Strain 19 vaccination program for a 2-3 year period. For these reasons, the decision criteria used by the USFWS in allowing WGFD to implement their interim vaccination program for a period of up to 3 years are different than and independent of the decision criteria that will be used in the selection of a disease management program for the NER in the BEMP EIS process.

It is clear from the analyses in the EA, compatibility determination, and biological assessment that the potential impacts of this 2-3 year program, which will be undertaken for only about 1 month out of each year, are inconsequential. I emphasize that the implementation of this interim action will not influence the decision in the BEMP EIS process.

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Regional Director, Mountain Prairie Region Date
U.S. Fish and Wildlife Service

Attachment A – Concurrence Memo - page 1

Attachment B
Errata Sheet

Environmental Assessment of Wyoming Game and Fish Department's
Proposed Interim Vaccination Program for Elk on the National Elk Refuge,
Teton County, Wyoming

Page 9 Regarding the statement that "...the two main procedures for mitigating the high seroprevalence of brucellosis caused by concentrating elk at feedgrounds are (1) maximizing standing forage production in cultivated areas to annually delay supplemental feeding as long as possible, and (2)...," WGFD noted that "Getting elk off feed earlier would help, since abortions begin in February and peak in April, but delaying feeding until January would have no effect." While the first listed procedure holds true for diseases in general, WGFD is correct from the standpoint of brucellosis transmissions.

Page 25 The EA mistakenly stated that sage grouse have been proposed for listing under the Endangered Species Act. The EA should have noted that the USFWS has received several petitions to list the greater sage grouse.

Page 35 In the third paragraph, the challenge dose used by WGFD should have been 7.5 x 10^6 colony-forming units in the Thorne et al. (1981) and Herriges et al. (1989) studies.

Page 36 In the citation in the middle of the paragraph, "(Alexander et al. 1981, Thorne 2001)," Thorne 2001 should not have been cited because it is not the primary citation.

Page 38 In the biosafety section, WGFD asked that the following statement be made: "No adverse effects of Strain 19 on feedground elk, where administered at doses used by WGFD, has been documented."

Page 38 In the conclusion section, WGFD asked that the following statement be made: "Seroprevalence (using the "standard" tests) may actually increase in the short term while adults are being vaccinated."

Page 42 Under the Proposed Action Alternative in the "Effects due to Changes in Elk and Bison Distribution and Mortality" section, WGFD asked that it be noted that the potential for reduced lameness (due to a possible negligible reduction in brucellosis) could potentially reduce predation to a negligible degree. However, given the negligible effects that the interim program would have on prevalence of *B. abortus* in elk, there would be negligible or no changes in the risk to other species. Furthermore, data on moose in the southern GYA (T. Roffe, USGS, BRD, pers. comm. 2003) do not support the contention that brucellosis has any

impact on that species and, thus, there may be no benefit to moose. Data on brucellosis in bighorn sheep does not appear to be available.
Under the No Action Alternative in the "Biosafety" section, WGFD asked that it be mentioned that field strain *B. abortus* can negatively affect other species of wildlife (moose and bighorn sheep).

Page 43 WGFD asked that the following statement be noted with respect to the discussion on page 43: "The majority of vaccinated elk are expected to have cleared the vaccine prior to migration off the NER. Therefore scavengers, predators, and other wildlife found off the NER will have little change for exposure to Strain 19 from elk tissues." However, there is no available data to substantiate this.

Page 46 In the Livestock Sector section, WGFD asked that mention be made that, "If the interim vaccination program prevents the single abortion that would have led to a bovine infection, the positive effects would be major." The USFWS agrees with this statement. However, as explained on page 46 of the EA, the probability of a bovine being infected by an aborted elk fetus during the next 3 years, absent the interim vaccination program, is extremely low. With the implementation of the interim vaccination program, the probability would still be extremely low and the change in risk would not be measurable. As explained in the EA, most of the abortions by elk occur in locations and at times when livestock are not present. A small change to an already very low risk cannot be considered a major effect.

Page 48 Public comments noted that implementation of the interim vaccination program would eliminate a "control" (elk feeding area without vaccination) that has provided a comparison with WGFD feedgrounds where vaccination is ongoing. However, it is also recognized that many other factors differ between the NER feedgrounds and WGFD feedgrounds that limit the scientific utility of NER's use as a control area.